

03-11-03 14:44 FROM-RatnerPrestia
Appln. No. 09/718,225
Amtd. dated March 11, 2003
Reply to Office Action of January 6, 2003

T-878 P.003/013 F-267
SAR 13632

Listing of Claims:

1 1. (Currently Amended) A method of depositing at least one island
2 of a liquid electronic material in a precise pattern on at least one electrode on a
3 surface comprising the steps of;

4 4 forming a first layer of the at least one electrode on the surface to
5 provide at least one electrical contact to the at least one island;

6 6 forming a second layer of the at least one electrode on a portion of the
7 first layer of the at least one electrode substantially surrounding the precise pattern
8 of the at least one island; and

9 9 depositing the liquid material on the at least one electrode so that the
10 second layer of the at least one electrode constrains the liquid electronic material in
11 the precise pattern.

12 12 wherein the fluid is a liquid deposited material.

1 1. (Original) A two layer electrode structure to promote the
2 deposition of a fluid in a precise island pattern comprising;

3 3 a first electrode layer formed on a surface;

4 4 at least one island of the fluid in the precise island pattern formed on
5 the first electrode layer and in electrical contact with the first electrode layer; and

6 6 a second layer formed in contact with the first electrode layer and
7 substantially surrounding the at least one island of the precise island pattern.

1 1. (Original) The two layer electrode structure of claim 2,
2 wherein the second layer is a low surface energy material.

03-11-03 14:44 FROM-RatnerPrestia
Appn. No. 09/718,225
Amdt. dated March 11, 2003
Reply to Office Action of January 6, 2003

T-878 P 004/013 F-267
SAR 13632

1 4. (Original) The two layer electrode structure of claim 3,
2 wherein the low surface energy material is at least one of Teflon and polyamide.

1 5. (Original) The two layer electrode structure of claim 2,
2 wherein the second layer is a conductor.

1 6. (Original) The two layer electrode structure of claim 2,
2 wherein the second layer includes a plurality of sub-layers.

1 7. (Original) The two layer electrode structure of claim 6,
2 wherein an exposed sub-layer of the second layer is a low surface energy material.

1 8. (Original) The two layer electrode structure of claim 6,
2 wherein at least one sub-layer of the second layer includes a conductor.

1 9. (Original) The two layer electrode structure of claim 2,
2 wherein the first electrode layer is a transparent conducting material.

1 10. (Original) The two layer electrode structure of claim 9,
2 wherein the second layer includes a high conductivity material that is electrically
3 coupled to the first electrode layer.

1 11. (Original) The two layer electrode structure of claim 10,
2 wherein;

3 the second layer includes a plurality of sub-layers; and

4 an exposed sub-layer of the second layer is a low surface energy
5 material.

1 12. (Original) The two layer electrode structure of claim 10,
2 wherein the first electrode layer is formed in the precise island pattern.

03-11-03 14:44 FROM=RatnerPrestia
Appn. No. 09/718,225
Amdt. dated March 11, 2003
Reply to Office Action of January 6, 2003

T-878 P.005/013 F-267
SAR 13632

1 13. (Original) The two layer electrode structure of claim 2,
2 wherein the first electrode layer is at least one of indium-tin oxide (ITO) polyaniline,
3 and a thin metal.

1 14. (Original) The two layer electrode structure of claim 2,
2 wherein the fluid is a liquid deposited material.

1 15. (Currently Amended) The two layer electrode structure of
2 claim 2, wherein the fluid is at least one of a liquid crystal material, an organic light
3 emitting diode (OLED) material, an electron ~~transport~~transport layer material, a hole
4 ~~transport~~transport layer material, an insulator material, and a color filter material.

1 16. (Original) The two layer electrode structure of claim 2,
2 wherein the fluid is a powder deposition material.

1 17. (Currently Amended) A method of improving a
2 conductivity of a transparent electrode structure in an electro-optical device
3 comprising the steps of;

4 forming a transparent electrode material on a surface of the electro-
5 optical device; and

6 forming a high conductivity material on the surface of the electro-
7 optical device, the high conductivity material being one of adjacent to and on top of
8 the transparent electrode material;

9 wherein the high conductivity material is in electrical contact with the
10 transparent electrode material and is configured not to obscure light passing through
11 the transparent electrode material.

1 18. (Currently Amended) An electrode structure comprising;
2 a substrate having a surface;

03-11-03 14:44 FROM-RatnerPrestia
Appn. No. 09/718,225
Amdt. dated March 11, 2003
Reply to Office Action of January 6, 2003

T-078 P.006/013 F-267
SAR 13632

3 a first transparent electrode layer formed in a first area of the surface
4 which corresponds to at least one transparent window; and

5 a second electrode layer having a higher conductivity than the first
6 electrode layer and being formed in a second area of the surface, the second
7 electrode layer being one of adjacent to and on top of the first transparent electrode
8 layer and being electrically coupled to the first transparent electrode layer.

1 19. (Original) The two layer electrode structure of claim 18,
2 wherein the second layer is composed of a plurality of sub-layers.

1 20. (Original) The two layer electrode structure of claim 19,
2 wherein an exposed sub-layer of the second layer is a low surface energy material.

1 21. (Original) The two layer electrode structure of claim 18,
2 wherein the first transparent electrode layer is indium-tin oxide (ITO).

1 22. (Original) The two layer electrode structure of claim 21,
2 wherein the second layer is at least one of polysilicon and a metallic conductor.

1 23. (Original) The two layer electrode structure of claim 21,
2 wherein;

3 the second layer has a plurality of sub-layers, including:
4 a contact sub-layer including one of titanium-tungsten, palladium, and
5 titanium, which is in electrical contact with the first transparent electrode layer; and
6 an aluminum sub-layer which is in electrical contact with the contact
7 sub-layer.

1 24. (Original) The two layer electrode structure of claim 23,
2 further including an exposed sub-layer formed from a low surface energy material.

03-11-03 14:45 FROM-RatnerPrestia
Appn. No. 09/718,225
Amtd. dated March 11, 2003
Reply to Office Action of January 6, 2003

T-878 P.007/013 F-267
SAR 13632

1 25. (Original) The two layer electrode structure of claim 18,
2 wherein the first transparent electrode layer is one of tin oxide, indium-tin oxide,
3 gold, calcium, and polyaniline.

1 26. (Original) The two layer electrode structure of claim 18,
2 wherein the second area of the surface corresponds to at least one non-transparent
3 section.

1 27. (Original) The two layer electrode structure of claim 26,
2 wherein the first area of the surface includes a portion of at least one non-
3 transparent section.

1 28. (Original) The two layer electrode structure of claim 27,
2 wherein the portion of each non-transparent section on which the first transparent
3 electrode layer is formed is a whole of the at least one non-transparent section.

1 29. (Original) The two layer electrode structure of claim 18,
2 wherein the first transparent electrode layer and the second electrode layer extend to
3 a substantially equal height above the surface.

1 30. (Original) The two layer electrode structure of claim 26,
2 wherein the at least one non-transparent section surrounds the at least one
3 transparent window.